REMARKS

Claims 6-8 have been canceled without prejudice. Claims 1-5 and 9-12 have been amended to clarify the invention. Support for Claims 1-5 and 9-12 can be found in the canceled Claims 6-8 and drawings, for example. Accordingly, Claims 1-5 and 9-12 are pending in this application. The specification has been amended to add reference numerals of a reflecting mirror, a luminescent paint, and an optical fiber. New drawings have been added in accordance with the disclosure of the specification.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE." The amendments do not constitute the addition of any new matter to the specification. Applicants respectfully request entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Drawings Objection

The drawings have been objected to under 37 CFR 1.83(a). The Examiner asserts that the reflecting mirror, luminescent paint, and optical fiber must be shown or the features canceled from the claims. New Figures 3-5 have been added to indicate the reflecting mirror, luminescent paint, and optical fiber with new reference numerals in accordance with the amendments to the specification. These drawings are merely illustrated based on the description of the reflecting mirror, luminescent paint, and optical fiber. Therefore, these drawings do not raise the issue of new matter. It is believed that one having ordinary skill in the art would understand easily the present invention with the drawings. Thus, Applicants respectfully request withdrawal of this objection.

Specification Objection

The abstract of the disclosure has been objected to because it is an unintelligible run-on type sentence. A substitute abstract has been submitted to the USPTO together with this Remarks. The substitute abstract does not include an unintelligible run-on type sentence, thereby obviating this objection. Withdrawal of this objection is respectfully requested.

Rejection Under 35 U.S.C. § 112

Claims 1-12 have been rejected under 35 U.S.C. § 112, second paragraph, with regard to the terms "zonally," "forefront," "near," "the other end," "means for sensing," "said sensor," and "the second oncoming vehicle" in the claims as filed. The claims have been amended to correct

the terms, thereby obviating this rejection. The Examiner asserts that the terms "emitting" and "emits" used throughout the claims, is used to mean "to reflect," while the accepted meaning is "to give out." The claims have been amended to correct the informalities, thereby obviating this rejection. Applicants respectfully request withdrawal of this rejection.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, 5, 8, 9 and 12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by each of: Gillner et al. (U.S. Patent 4,978,207); Voelker et al. (U.S. Patent 3,200,705); Cardarelli (U.S. Patent 2,164,985); Wing (U.S. Patent 1,930,917); and van Gelder (U.S. Patent 1,837,085). Claims 1, 2, 5, 8, 9 and 12 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Kushida (U.S. Patent 6,264,334). Claims 1, 3, 5, 8, 10 and 12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by each of Anders (U.S. Patent 5,665,793 and 5,472,737) and Feuvray (U.S. Patent 4,248,001). Claims 1, 4, 5, 8, 11 and 12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by each of: Swemer (U.S. Patent 5,042,894); Eigenmann (U.S. Patent 4,993,868); Callhan (U.S. Patent 4,737,049); and Wyckoff (U.S. Patent 4,069,787). Claims 1, 4, 5, 8, 11 and 12 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Custers et al. (U.S. Patent 6,305,874). Applicants respectfully traverse this rejection under 35 U.S.C. § 102. The claims as clarified patentably distinguish over the references.

Claim 1 has been amended by adding the limitation of "wherein said light-reflecting material is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle." Claim 5 has been rewritten in independent form by adding the limitation of Claim 1 and the limitation of "said sensor is installed continuously along the right side of the road and is sufficiently long to detect a right-turn signal of the second oncoming vehicle, and said light emitter is installed at the corner of the intersection." Claims 9-11 have been rewritten in independent form by adding the limitation of Claim 8 and the limitation of "and is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle; the driver making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected", respectively. Claim 12 has been rewritten in independent form by

adding the limitation of Claim 8 and the limitation of "i) the sensor is installed continuously along the right side of the road and is sufficiently long to detect a right-turn signal of the second oncoming, ii) the light emitter is installed at the corner of the intersection; the driver making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected."

In contrast, none of the above references disclose the claimed specific position for installing the light-reflecting material or the light-emitting material, much less the recited continuous positioning thereof.

An anticipation rejection under § 102 requires that "every element of the claimed invention must be identically shown in a single reference." *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990). "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). In view of the differences between the claimed subject matter and the disclosure of any of the cited references, the present invention could not be anticipated by any of these references. Accordingly, Applicants respectfully request withdrawal of the rejections under § 102.

Rejections of Under 35 U.S.C. § 103

Claims 6 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over each of: Gillner et al., Voelker et al., Cardarelli, Wing, van Gelder, Kushida, Anders, Feuvray, Swemer, Eigenmann, Callhan, Wyckoff, and Custers et al., as applied above. Applicants respectfully traverse this rejection under 35 U.S.C. § 103.

The recitation of Claim 6 has been incorporated in Claims 1 and 9-11, respectively, and Claim 6 has been canceled without prejudice. The recitation of Claim 7 has been incorporated in Claims 5 and 12, respectively, and Claim 7 has been canceled without prejudice. Thus, the patentability of Claims 1-5 and 9-12 will be explained below.

In rejecting claims under § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). To establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991); M.P.E.P. § 706.02(j). However, as noted above, the above references fail to disclose the claimed specific position for installing the

light-reflecting material or the light-emitting material. Accordingly, no proper *prima facie* showing of obviousness has been set forth.

Moreover, there is no teaching or suggestion in any of these references to modify their disclosures to arrive at the recited continuous installation of the light-reflecting material. The continuous installation is designed to allow a driver to see the turning intentions of a second oncoming car that is following a first oncoming car. By continuously installing the light-reflecting material, a driver waiting to make a left turn can surely and accurately visually check the traveling intention of the second oncoming vehicle throughout the entire time that the second oncoming vehicle is approaching the intersection. This can reduce the burden placed on the driver waiting to make a left turn, improves traffic safety at intersections, and greatly contributes to society. See page 9, lines 11-14 of Applicants' specification. The above references disclose nothing that would suggest that such a result could be achieved, as they are not specifically concerned with the problem addressed by the presently claimed invention, namely the ability to identify the turning intentions of second oncoming vehicles.

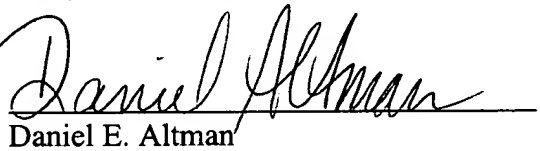
In view of the foregoing, the present invention could not be obvious over any of the references. Applicants respectfully request withdrawal of these rejections.

CONCLUSION

In light of the Applicants' foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: February 4, 2003 By: 

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Paragraph beginning at line 6 of page 5 has been amended as follows:

As a luminescent material, preferred are a reflecting mirror 4a which reflects blinking of a turn signal, a reflective paint 4b which reflects blinking of a turn signal, an optical fiber which at one end 4c senses light from blinking turn signals and emits light from the other end 4d, and a combination of a means for sensing light from blinking turn signals and a means for emitting light based on the signals sensed by the means for sensing light.

Paragraph beginning at line 4 of page 7 has been amended as follows:

Because the turn signal of a vehicle is generally located near a headlight, the luminescent materials installed on the road surface are required to emit light in the direction of the vehicle waiting to make a left turn upon sensing light going in a diagonal and downward direction from the turn signal. In order to achieve the above, reflecting mirrors 4a used as a luminescent material include those with many irregularities provided on the surface of a flat plate, for example, by attaching a limitless number of spherical glass beads, by causing diffused reflection by a wavelike shape or by securing the direction of light toward the waiting left-turn vehicle by lining up many concave mirrors, convex mirrors and slantingly placed flat mirrors. Additionally, a paint in which fine glass beads are mixed to give light reflection can also be applied.

Paragraph beginning at line 14 of page 7 has been amended as follows:

As another ~~best[~~preferred?~~]~~ mode for carrying out the invention, by installing a large number of one end 4c of optical fibers zonally in the direction of the turn signal of a vehicle and directing the other end 4d in the direction of a waiting left-turn vehicle, the light from the turn signal can reach the waiting left-turn vehicle with small loss.

IN THE CLAIMS:

Claims 6-8 have been canceled without prejudice.

Claims 1-5 and 9-12 have been amended as follows:

1. (Amended) A left-turn driving support system for supporting a driver of a vehicle waiting ~~for making~~to make a left turn at an intersection where vehicles travel on the

~~left~~right side of a road, comprising a light-~~emitting device~~reflecting material which ~~emits~~reflects light ~~upon sensing~~from blinking signals of a turn signal of a second oncoming vehicle following a ~~forefront~~first oncoming vehicle, which are about to enter the intersection, ~~said light-emitting device being installed in a position from which the driver of the vehicle waiting for making a left turn is able to check emitted light from the light-emitting device~~wherein said light-reflecting material is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle.

2. (Amended) The left-turn driving support system as claimed in Claim 1, wherein said light-~~emitting device~~reflecting material is a reflecting mirror which reflects ~~light-emitting~~light from the blinking signals of ~~a~~the turn signal.

3. (Amended) The left-turn driving support system as claimed in Claim 1, wherein said light-~~emitting device~~reflecting material is a luminescent paint which reflects light from blinking signals of the turn signal.

4. (Amended) The left-turn driving support system as claimed in Claim 1, wherein said light-~~emitting device~~reflecting material is an optical fiber having two ends which senses the blinking signals of the turn signal from one end and ~~emits~~reflects the light from the other end.

5. (Amended) ~~The~~A left-turn driving support system ~~as claimed in Claim 1~~for supporting a driver of a vehicle waiting to make a left turn at an intersection where vehicles travel on the right side of a road, comprising a light-emitting material which emits light from blinking signals of a turn signal of a second oncoming vehicle following a first oncoming vehicle, which are about to enter the intersection, wherein said light-emitting ~~device~~material comprises a sensor for sensing light of the blinking signals of the turn signal and a light emitter for emitting light based on the signals sensed by ~~the means~~said sensor ~~for sensing the light of the blinking signals~~, and said sensor is installed continuously along the right side of the road and is sufficiently long to detect a right-turn signal of the second oncoming vehicle, and said light emitter is installed at the corner of the intersection.

9. (Amended) ~~The~~A method ~~as claimed in Claim 8~~for supporting a driver of a vehicle waiting to make a left turn at an intersection where vehicles travel on the right side of a road, comprising

sensing blinking signals of a turn signal of a second oncoming vehicle following a first oncoming vehicle, which are about to enter the intersection; and

reflecting light toward the driver of the vehicle waiting to make a left turn, wherein the driver is able to visually check the reflected light, ~~wherein~~and the sensing and ~~emitting~~reflecting steps are conducted using a reflecting mirror which reflects ~~light-emitting~~light from the blinking signals of ~~a~~the turn signal and is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle; the driver making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected.

10. (Amended) ~~The~~A method ~~as claimed in Claim 8~~for supporting a driver of a vehicle waiting to make a left turn at an intersection where vehicles travel on the right side of a road, comprising

sensing blinking signals of a turn signal of a second oncoming vehicle following a first oncoming vehicle, which are about to enter the intersection; and

reflecting light toward the driver of the vehicle waiting to make a left turn, wherein the driver is able to visually check the reflected light, ~~wherein~~and the sensing and ~~emitting~~reflecting steps are conducted using a luminescent paint which reflects light from the blinking signals of the turn signal and is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle; the driver making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected.

11. (Amended) ~~The~~A method ~~as claimed in Claim 8~~for supporting a driver of a vehicle waiting to make a left turn at an intersection where vehicles travel on the right side of a road, comprising

sensing blinking signals of a turn signal of a second oncoming vehicle following a first oncoming vehicle, which are about to enter the intersection; and

reflecting light toward the driver of the vehicle waiting to make a left turn, wherein the driver is able to visually check the reflected light, ~~wherein~~and the sensing and ~~emitting~~reflecting steps are conducted using an optical fiber having two ends which senses the blinking signals of the turn signal from one end and ~~emits~~reflects the light from the other end and is installed continuously along the centerline of the road and is sufficiently long to detect a left-turn signal of the second oncoming vehicle; the driver

making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected.

12. (Amended) ~~The~~A method ~~as claimed in Claim 8~~for supporting a driver of a vehicle waiting to make a left turn at an intersection where vehicles travel on the right side of a road, comprising

sensing blinking signals of a turn signal of a second oncoming vehicle following a first oncoming vehicle, which are about to enter the intersection; and

emitting light toward the driver of the vehicle waiting to make a left turn, wherein the driver is able to visually check the emitted light, ~~wherein~~and the sensing and emitting steps are conducted using a sensor for sensing light of the blinking signals of the turn signal which is installed continuously along the right side of the road and is sufficiently long to detect a right-turn signal of the second oncoming and a light emitter for emitting light based on the signals sensed by ~~the means~~said sensor ~~for sensing the light of the blinking signals~~which is installed at the corner of the intersection; the driver making a left turn when the driver deems condition to be safe taking into consideration, the presence or absence of the light reflected.

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